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March 18, 2008

AGENDA ITEM 4a

TO: MEMBERS OF THE HEALTH BENEFITS COMMITTEE

I. SUBJECT: Health and Disease Management Initiative Update

II. PROGRAM: Health Benefits

III. RECOMMENDATION: Information Only

IV. BACKGROUND:

The Health Benefits Branch (HBB) is working on an initiative to design, develop and execute a best-in-class Health and Disease Management Program. This initiative will:

- assess current health plan capabilities
- analyze current chronic condition costs
- develop consistent disease management performance monitoring metrics
- recommend future directions.

At the February 2008 CalPERS Health Benefits Committee meeting, Mercer presented an assessment of current health plan capabilities, and our progress to date on the development of disease management performance monitoring metrics. This agenda item provides an analysis of chronic condition costs to set a baseline for CalPERS health and disease management program. It also provides a suggested performance monitoring approach.

V. ANALYSIS:

A. Cost Analysis

Using Basic health plan member claims data from the Health Care Decision Support System (HCDSS), staff created baseline costs for chronic conditions within the CalPERS population. The analysis focuses on seven conditions: the five conditions our health plans currently manage (coronary artery disease (CAD), diabetes, asthma, chronic obstructive pulmonary disorder (COPD), congestive heart failure); and, hypertension and depression, often co-morbid with the other chronic conditions.

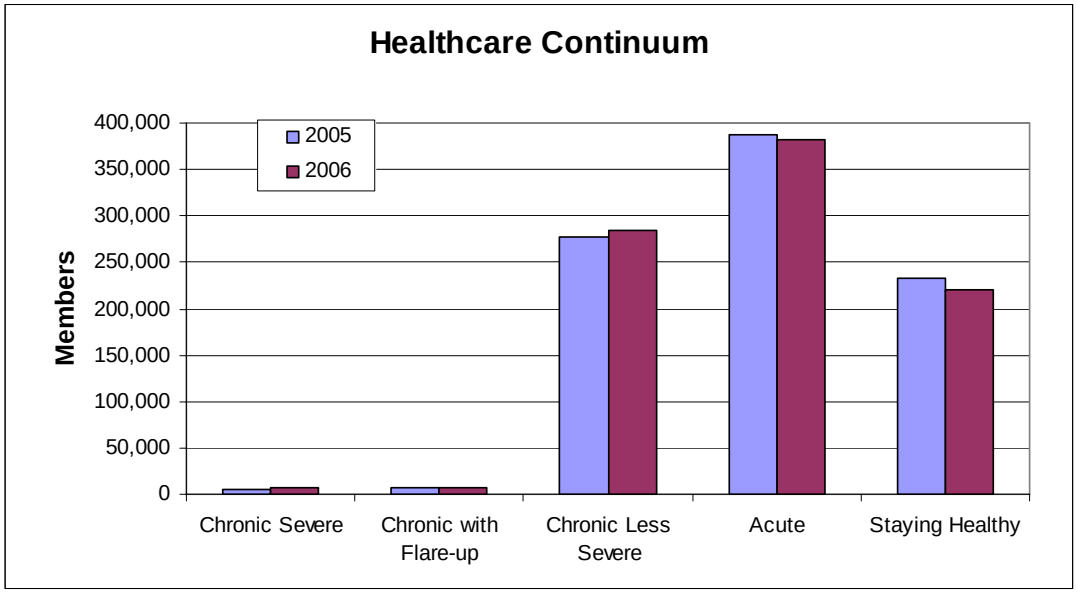
This section presents a discussion of the healthcare continuum, chronic condition costs, and chronic illness severity. All data is abstracted from claims data; not from medical records. The following needs to be kept in mind when interpreting the presented data:

- *Healthcare continuum*: Patients are counted once per category.
- *Chronic condition costs*: All listed costs are episode costs. An episode cost combines all costs associated with a single condition (e.g. asthma), and includes inpatient and outpatient care, prescription drugs, and other related costs for that episode.
- *Chronic illness severity*: Disease staging episode costs and patient counts are discrete; there is no overlap between conditions.

Healthcare Continuum

The healthcare continuum refers to five categories of individual health status ranging from those who are healthy and have no claims –"staying healthy" – to those with advanced and significant chronic conditions – "chronic severe". The chart on the next page arrays our members along the continuum. The three chronic condition categories have a long-term and perhaps permanent treatment horizon. Acute conditions have a short-term treatment horizon. The remaining category, staying healthy, represents members who sought well care services or did not use healthcare services.

Using the HCDSS, staff categorized the Basic CalPERS population according to this healthcare continuum for 2005 and 2006. The CalPERS data shows that between 2005 and 2006 there was a 15% increase in those in the *chronic severe* category, and a 3% increase in those in the *chronic less severe* category. Those members with *acute* episodes declined by 2%, while those in the *chronic with flare-up* category declined by 3%. The number of those *staying healthy* declined as well by 6%.



Healthcare Continuum			
	2005	**2006**	**% Change**
[1] Chronic Severe	5,725	6,581	15%
[2] Chronic with Flare-up	7,694	7,494	-3%
[3] Chronic Less Severe	277,815	284,871	3%
[4] Acute	388,366	381,560	-2%
[5] Staying Healthy	233,217	219,877	-6%

Continuum of Care Definitions	
1	Chronic Severe: Chronic condition with multiple complications
2	Chronic with Flare-Up: Chronic condition with an associated flare up (even if presenting for first time) who are not assigned to Chronic Severe
3	Chronic Less Severe: Early or advanced onset with risk of complications
4	Acute: Limited in duration
5	Staying Healthy: Well care and nonusers

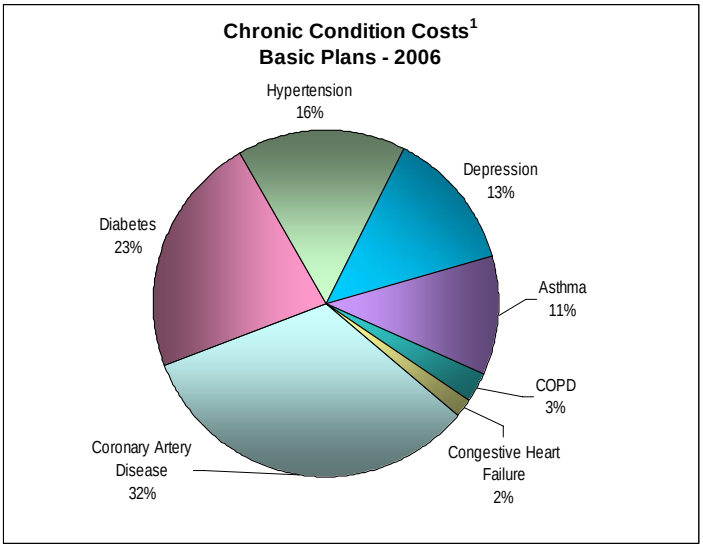
Chronic Condition Costs

The graph and chart on the next page show how much CalPERS spent in 2006 in claims costs associated with chronic conditions for its Basic health plans: approximately $484 million.

Of the seven chronic diseases examined:

- coronary artery disease represents 32%, and is the most costly at $160 million
- diabetes, representing 23%, costs $109 million
- hypertension, representing 16%, costs $76 million.

The occurrence of each of these three conditions varies based on a number of *causes* which lead to its development. Also, medical complications can result as a *consequence* of having any of these diseases. For example, a combination of risk factors such as obesity, cholesterol level, hypertension, diabetes, and cigarette usage can lead to coronary artery disease (CAD). CAD may, in turn, lead to other complications such as recurrent heart attacks, heart failure, stroke, and abnormal rhythms of the heart (arrhythmias). These relationships reinforce the need for an integrated approach to health and disease management.



[1]CalPERS HCDSS 2006

Chronic Condition	Cost	% of Chronic Conditions
Coronary Artery Disease	$160,407,828	32%
Diabetes	$108,914,788	23%
Hypertension	$75,634,664	16%
Depression	$63,833,156	13%
Asthma	$53,181,150	11%
COPD	$14,483,683	3%
Congestive Heart Failure	$7,550,161	2%
Total Chronic Conditions	$484,005,430	100%

Chronic Illness Severity

Severity staging is a classification system that uses diagnostic findings to cluster patients who require similar treatment and have similar expected outcomes. Definitions of each severity of illness stage are found in the table below:

Stage	Description
0	History of, suspicion of, or exposure to disease
1	Early onset or cause is specified AND low risk of complications; slowed or reversed progression is possible
2	Advanced onset, multiple contributing causes AND significant risk of complications; slowed or reversed progression less likely
3	Generalized systemic involvement, difficult to determine cause AND multiple complications; slowed or reversed progression remote
4	Death

In understanding the cost of chronic conditions, it is important to analyze the relative costs associated with varying degrees of severity for each condition. Severity staging of chronic diseases allows us to examine the dramatic increase in costs as members progress to more severe stages of a disease. It can also indicate how well-controlled a given disease is within the portion of members that have the condition and how well the member, provider or health plan is managing the disease.

The chart below shows the prevalence and cost of key chronic conditions for CalPERS members in Stages 1-3 of severity. This chart includes severity staging for all members in our Basic plans, including those that are 65 and older.

Chronic Disease Condition		2006 Disease Stages			
		Stage 1	Stage 2	Stage 3	Total
CAD	Number of Patients	12,566	2,207	1,389	16,162
	Cost of Episode	$62,535,075	$46,059,242	$51,813,511	$160,407,828
	Cost Per Patient Per Episode	$4,977	$20,870	$37,303	$9,925
Diabetes Mellitus	Number of Patients	40,392	7,726	812	48,930
	Cost of Episode	$68,274,969	$27,310,158	$13,329,661	$108,914,788
	Cost Per Patient Per Episode	$1,690	$3,535	$16,416	$2,226
Hypertension	Number of Patients	81,693	5,778	1,219	88,690
	Cost of Episode	$59,910,484	$6,645,125	$9,079,055	$75,634,664
	Cost Per Patient Per Episode	$733	$1,150	$7,448	$853
Depression	Number of Patients	27,110	22,060	52	49,222
	Cost of Episode	$18,108,275	$44,601,255	$1,123,626	$63,833,156
	Cost Per Patient Per Episode	$668	$2,022	$21,608	$1,297
Asthma	Number of Patients	31,168	8,101	1,856	41,125
	Cost of Episode	$33,064,929	$15,440,065	$4,676,156	$53,181,150
	Cost Per Patient Per Episode	$1,061	$1,906	$2,519	$1,293
COPD	Number of Patients	2,957	3,612	60	6,629
	Cost of Episode	$4,467,091	$7,687,489	$2,329,103	$14,483,683
	Cost Per Patient Per Episode	$1,511	$2,128	$38,818	$2,185
CHF	Number of Patients	0	0	2,730	2,730
	Cost of Episode	$0	$0	$7,550,162	$7,550,162
	Cost Per Patient Per Episode	$0	$0	$2,766	$2,766
Total	Total Cost of these 7 Conditions	$246,360,824	$147,743,333	$89,901,273	$484,005,430

Note: All dollar amounts were rounded to the nearest whole dollar. Totals may not add due to rounding.

This chart shows:

- Hypertension, as a stand-alone diagnosis, has the highest number of patients in the first and second disease stages. Except for depression, it is the least costly of the episodes in these two stages and the least costly in total. It is, however, often found as a risk factor or co-morbid diagnosis in other chronic diseases.
- Diabetes and asthma have the next highest number of patients in disease stage 1 (40,392 and 31,168 respectively), but in stage 2, diabetes more than doubles in cost per patient, and more than quadruples in cost by stage 3. Asthma costs per episode ranges between $1,061 for Stage 1 to $2,519 for Stage 3.

- Except for COPD, coronary artery disease has fewer patient episodes than any other chronic condition at Stage 1, yet by patient episode, it is the costliest of the chronic conditions ($4,977 per patient episode). By Stage 2, it is five times more costly, and by stage 3, it again rivals COPD in patient episode costs ($37,303 per episode and $38,818 per episode respectively). In Stage 3, CAD has the highest per episode cost.

As noted earlier, the severity staging chart includes both members under 65 and those who are 65 and older. We separately examined the impact of the 65 and older group to determine its effect on the overall numbers.

In the chronic disease severity staging charts presented, there are a total of 253,488 members who had chronic condition episodes in 2006, costing $484 million. Of that number, 6% of the episodes were for patients aged 65 and older, costing approximately $44 million. The remaining 94% were for patients 64 and younger, costing approximately $440 million. In all chronic condition categories, the cost per episode for the 64 and younger did not significantly differ from the cost of those 65 and older.

Medical costs for chronic conditions for members 65 and older who are in the Basic health plan population do not significantly affect the overall cost of chronic conditions when looking at the disease stages 1-3. The number of episodes and cost per episode in the 64 and younger patient population, however, creates implications for future costs as the population ages, and those with chronic diseases progress to costlier disease stages.

Summary

Each chronic condition varies in terms of risk factors that lead to its development, and its associated complications. Generally, wellness programs target disease prevention by reducing risk factors. Disease management programs address complications, as well as risk factors, to reduce disease progression. In an integrated system, there will be overlap between wellness and disease management programs, as they both address risk factors. We are working to ensure that the CalPERS health and disease management initiative addresses the full continuum of care across the entire population, and engages our members as early as possible to prevent disease development, or slow its progression.

B. Performance Monitoring

To determine the optimal approach to standardize performance monitoring, CalPERS staff and Mercer conducted the following activities:

- October 2007: Defined the process needed to measure program performance for five key disease states: asthma, chronic obstructive pulmonary disease, coronary artery disease, diabetes, and congestive heart failure.

- November 2007: Administered a survey to determine the ability of the CalPERS health plan partners to report on each of the defined measures.
- December 2007: Evaluated and summarized survey responses
- January 2008: Conducted site visits to confirm survey responses and assess overall reporting capabilities.

Of the 143 metrics originally identified by Mercer and CalPERS as key to understanding health plan performance, the three health plans can report on only 26 measures and two of the health plans can report another 66 measures.

Mercer recommends that CalPERS take the following actions to successfully monitor health plan performance in the area of Health & Disease Management:

- Build a thorough and consistent process for monitoring health plan performance:
  - Develop uniform methodologies and reporting frequencies for each desired metric to ensure consistency across the three health plans
  - Require CalPERS-specific (not book of business) reporting on all metrics
  - Collaborate with health plans to develop a process and schedule to expand the metrics to include those not currently tracked and reported by all of them
- Establish baseline and improvement targets for each of the five core disease management programs and compare results to best practices.
- Develop performance guarantees to hold health plans accountable for their performance in comparison to program-specific baselines and targets
- Establish a formal process for health plan performance review:
  - Use standardized dashboards
  - Involve key stakeholders at the health plans and within CalPERS to participate in performance improvement activities.

C. Next Steps

CalPERS staff and Mercer consultants will provide the final Health and Disease Management Initiative report at the April 2008 HBC meeting which will include:

- Specific recommendations for the long-term direction of the Health and Disease Management program (including expansion to additional chronic conditions)
- Assessment of the feasibility of carving out components of the program
- How this initiative could fit within the Single Health Benefits Administrator Initiative

The long-term benefit derived from this initiative will be a healthier member population and lower costs from well-managed chronic conditions.

VI. STRATEGIC PLAN:

This request relates to Goals X and XI of the strategic plan which state:

- "Develop and administer quality, sustainable health benefit programs that are responsive to and valued by enrollees and employers."
- "Promote the ability of members and employers to make informed decisions resulting in improved lifestyle choices and health outcomes."

VII. RESULTS/COSTS:

This is an information item only.

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